

TRANSACTIONS OF THE PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, April 3, 1893.

The President, DR. WILLIAM HUNT, in the Chair.

THE CONTROL OF HÆMORRHAGE IN AMPUTATIONS AT THE SHOULDERJOINT.

Dr. JOHN H. BRINTON reported two cases as follows:

CASE I.—A man, forty-eight years of age, who had suffered for twenty-three years from osteitis deformans of the right tibia, sustained a fracture of the anatomical neck of the humerus in June, 1892. Under treatment union was secured without complication. Three months later, however, he presented himself with evident malignant disease of this bone, a tumor having developed in it in the immediate vicinity of the injury. Disarticulation was done, and at the operation, performed October 5, 1892, to prevent hæmorrhage, the long steel pins suggested by Dr. John A. Wyeth for use in amputations at the hip joint, were used; one transfixing the anterior axillary fold in front of the vessels, penetrating the tendon of the pectoralis major muscle, and emerging near the end of the acromion; the second needle pierced the deltoid and emerged just below the acromion. By carrying the needles, especially the anterior one, well upward, the constricting rubber band, which was then applied, was placed so high as not to prevent the rotation of the humeral head, or to interfere materially with its disarticulation.

This patient suffered very slight loss of blood at the time of the operation, and received but little shock. He reacted promptly and perfectly, and for several days did well, the wound uniting throughout. On the night between the fifth and sixth day the temperature rose to 104.5° , and a copious eruption, similar to that of measles, appeared on the abdomen and chest, and eventually invaded the extremities, and, indeed, the whole body. There was marked

coryza, and the tongue became brown and dry. This condition resisted all treatment and the free use of antipyretics. As the eruption spread, the temperature still rose, reaching 107.5° and 108° , and the patient died on the afternoon of the 15th of October, the tenth day after the operation, death being doubtless due to some form of septic infection not easy to determine.

CASE II.—A boy, aged ten years, suffering from an enchondroma of the humerus, close to its head, having a diameter of two and a half inches, and interfering with the joint motions by its bulk. Disarticulation was done November 28, 1892, and the elastic constrictor and steel pins were again resorted to.

The anterior pin was made to emerge three-quarters of an inch above the tip of the acromion. As a result, the circular turns of the tubing rested on a somewhat higher level than in the preceding case. Perfect freedom of the joint was preserved, and its disarticulation was not unimpeded. A roller bandage was applied as a compress under the tubing and directly over the artery. Hæmorrhage was thus perfectly prevented, and the removal of the limb, as in the former case, was practically a bloodless procedure. This boy recovered without accident. In both these instances an Esmarch elastic bandage was applied previous to the insertion of the pins.

Dr. WILLIAM W. KEEN, who assisted in these operations, remarked that he had never seen any better method of controlling hæmorrhage in such cases, and that in his opinion it is vastly superior to the method devised by himself some years previous.

In the first of Dr. Brinton's cases the pins were brought out at the end of the acromion process, and when the head of the bone was removed the skin slipped down and the constriction of the tube partially obliterated the cavity where the head of the bone had been. In the second case, the pins emerged three-fourths of an inch from the tip of the acromion, and there was no trouble from the slipping of the tube downward.

ENTERECTOMY FOR OBSTRUCTIVE EPITHELIOMA AT THE ILEO-CÆCAL VALVE; SECONDARY ANASTO- MOSIS BY ABBE'S LONG INCISION.

Dr. JAMES M. BARTON reported the case of a man, twenty-seven years of age, whom he first saw when in a state of great exhaustion from obstructive bowel symptoms which had already lasted some

weeks. Some obstruction in the vicinity of the ileo-cæcal valve was diagnosticated, and for the relief of this an incision, about three inches long, similar to the incision required for the removal of the appendix, was made in the right inguinal region. The ileum was found to be the seat of epithelioma and intussusception. The intussusception could not be reduced. About six inches of the intestine, including the obstructing epithelioma, were excised, and the operation terminated by making an artificial anus, on account of the threatened collapse of the patient. He recovered rapidly; gained in strength and flesh, and at the end of two months was again subjected to operation for closure of the artificial anus after anastomosis.

A three-inch incision was made about two inches to the left of the median line and parallel with it, ending just above Poupart's ligament. The ileum was readily identified, and as the transverse colon hung well into the wound, the sigmoid flexure was not searched for. After stripping the required portions of the bowel of their contents, and preventing their return by a temporary rubber ligature, the ileum and colon were laid side by side and joined by a line of suture five inches long; when completed, the needle was removed and the unused thread permitted to remain. A second line of suture, four and a half inches long, parallel and close to the first was introduced, and the unused threads were also permitted to remain.

Both bowels were then opened by a four-inch incision about a quarter of an inch from the last suture. A third suture was used to join the edges together, passing each stitch across the freshly divided edges so as to check the bleeding. This stitch is known among seamstresses as a "whipping stitch." The pliability of the intestines was such that not only the distal edge could be so closed, but a large portion of the edge on the side of the incision toward the operator. A needle was now placed on the unused thread attached to the second line of suture, and this was continued around the ends and in front of the opening, joining the intestines together at about a quarter of an inch from the opening and parallel to it. This suture, when completed, entirely surrounded the opening, and was about a quarter of an inch from it. Lastly, the unused thread of the first suture, which was still hanging at the end, had a needle put on it, and was carried around the ends and in front of the opening. This suture when completed also surrounded the opening and was about half an inch from it.

The operation can be quite rapidly performed, the intestines being held in contact by an assistant. After the first line of stitching is made it is still easier, and the suture can be made nearly as fast as the same operator would sew a seam in muslin.

The whole operation was performed with a constant stream of tepid boiled water flowing over the intestines being joined together. As soon as the stitching was completed the intestines were replaced in the abdominal cavity, which was thoroughly flushed, and as the sutured intestines laid in position without undue strain the abdomen was closed.

The slight vomiting after the ether soon ceased. A number of ounces of fecal matter passed from the artificial anus, but less than before the operation. At the expiration of twenty-four hours there was occasional regurgitation of fluid from the stomach, and on the second morning the regurgitated fluid had become coffee-colored. An hour later, forty-three hours after the last operation, the wound was reopened, but no cause of obstruction was discovered. The sutured intestines lay quite stiffly in place, being kept so by the numerous lines of sutures and the resulting plastic deposit; the small intestine was rather sharply flexed at the extremity, but not enough to obstruct. After as full a search as the condition of the patient warranted, it was concluded that the obstruction must be at the sutured portion. A loop of the ileum above the anastomosis was therefore drawn into the wound and another artificial anus made, but the obstruction was unrelieved, neither gas nor fecal matters passed, and the patient died forty-eight hours later, or four days after the operation.

At the post-mortem there was no evidence of recent peritonitis anywhere, the cause of all the difficulty being an old adhesion of the ileum to the abdominal wall at the left iliac fossa. The trailing ileum upward from the original artificial anus in the right iliac fossa ran directly across the abdomen to the point of attachment in the left iliac fossa, making a tense band; it then ran downward, and six feet of it were in the pelvis. About two feet of these six had been drawn under the band and used for the anastomosis operation. The remaining four feet, still in the pelvis, were sloughing, its circulation being entirely shut off by the band. All the parts above the band, including the intestines used in the anastomosis operation, were in admirable condition. The immediate cause of the obstruction was

the increased tension of the band, produced by pulling another loop of intestine under it at the operation.

In performing this operation again the reporter stated that he should make the incision in the median line, and make it higher and longer, so that he might not only see the condition of the intestines, find any abnormal adhesions, but before joining the intestines might place them in position in the abdominal cavity so that they might lie without strain or tension. The intestines when joined by six sutures are as unyielding as if there were a piece of cardboard between them five inches long. If the intestine does not lie easily in its new position, the bowel at one end or the other of the stiffened portion may be so sharply flexed upon itself as to cause obstruction. In addition, from the same cause, there may be unnecessary strain upon the sutures.

The sutures in the above case were severely tested, the transverse colon was pulled upward by the gastro-colic omentum, while the ileum, a few inches below the suture, was fast anchored by the adhesion. This strain was greatly increased by the subsequent abdominal distention and frequent vomiting. But as the specimen showed, it held perfectly.

The specimen removed at the enterectomy shows almost complete obstruction, the opening that remains being less than a quarter of an inch in diameter.

DR. W. W. KEEN remarked that with regard to the question of contraction he had a patient on whom he did a gastro-enterostomy a year ago, making an opening only an inch and a half in length. He is still perfectly comfortable. But in spite of such a result in a single case he believes that the long incision advocated by Abbé is the right one.

MR. TREVES has a brief article in a recent issue of the *Lancet* reporting a case in which he removed a portion of the sigmoid and brought the bowel together end to end in a very simple way. He first sewed the mucous membrane of one end to that of the other all around, and then inverted the peritonæum with a simple Lembert suture. The operation was done in a comparatively short time and the patient recovered beautifully.

AN OVARIAN TUMOR WEIGHING ONE HUNDRED AND
ELEVEN POUNDS REMOVED FROM A CHILD OF
FIFTEEN, WHOSE WEIGHT WAS SIXTY-
EIGHT POUNDS.

Dr. WILLIAM W. KEEN reported the case of Miss B., aged fifteen years, who, for two and a half years had been the subject of an intra-abdominal growth. It had been repeatedly tapped, and was finally brought to him for radical operation in April, 1893. Her abdomen was then enormously swollen.

The measurements were as follows: From the ensiform to the umbilicus, $16\frac{1}{2}$ inches; from the ensiform to the pubes, $29\frac{1}{2}$ inches; circumference, 49 inches. The veins over the abdomen very large. Nothing could be made out in the interior in consequence of the enormous abdominal distension. Examination of the urine showed no albumin and a very slight trace of sugar (?).

Operation. April 30, 1893. A small incision was made in the median line above the umbilicus, as the greater mass of the tumor lay there. A large trocar was thrust in and evacuated a very large quantity of characteristic opalescent ovarian fluid. The escape of this fluid revealed through the abdominal wall large masses lying especially under the liver and in the right iliac fossa. The incision was then enlarged until it measured, eventually, about eight inches in length. The hand introduced now revealed the growth to be an enormous ovarian cyst, reaching up to the diaphragm and pushing everything out of its way. There were a number of moderate adhesions, chiefly to the belly wall and the omentum. The viscera were, fortunately, entirely free. The pedicle was only $2\frac{1}{2}$ inches broad. The tumor arose in the right ovary, the left ovary being healthy but small.

The weight of the solid mass removed was twenty-seven pounds, and by actual weighing the fluid removed weighed eighty-four pounds, making a total of 111 pounds. The child herself weighed but sixty-eight pounds.

After the removal of the tumor a curious looking abdominal cavity was exposed to view. It looked almost like that of an eviscerated cadaver in the dissecting room. The tumor had so pushed the liver to the right and backward, and the stomach to the left, that nearly the whole of the diaphragm was exposed, and flapped up and

down with the pulsations of the heart. Down the middle of the cavity the bodies of the vertebrae were entirely exposed, showing the aorta and vena cava to their bifurcations, the intestines being a very minor consideration and pushed to each side in the hollow of the ribs and the lumbar regions. When the abdominal wall was sutured the abdomen was excessively scaphoid, the anterior abdominal wall lying directly on the aorta and vertebrae. The puckering of the skin, although moderately marked, was much less than had been expected.

When the operation was completed a glass drainage tube was inserted, and she was put to bed in very fair condition, in view of the gravity of the operation. The tumor was a multilocular cyst.

The child made an uninterrupted recovery. The drainage tube was removed on the fifth day, when the discharge had become almost nothing, but three days later a slight rise of temperature took place, and the discharge recommenced. A small rubber drainage tube was therefore re-inserted for a few days. She sat up at the end of two weeks.

ILEO-COLOSTOMY BY MEANS OF MURPHY'S BUTTON.

Dr. WILLIAM W. KEEN reported a case of cancer of the hepatic flexure of the colon, in the course of the treatment of which first an artificial anus and later an ileo-colostomy by means of Murphy's button had been done. This report is published in full in the ANNALS OF SURGERY, June, 1893, page 652 *et seq.*

Dr. JOHN B. DEAVER remarked that it had been his fortune to see this patient in consultation, at which time she appeared to be developing an attack of intestinal obstruction. The abdomen was considerably distended, but he had no difficulty in convincing himself that she had malignant disease. Intubation of the colon was done and four quarts of water were thrown into the colon, and it was clearly demonstrated that the fluid was largely arrested at the hepatic flexure. He believed then that she had a growth in the neighborhood of the ileo-caecal region, and that it involved the ascending colon.

Dr. Deaver further remarked that there is often a great difference between the clinical aspects of a case and the results of microscopical examination. While he has due respect for the pathologists, he knows that they are not always able to tell whether or not a

growth is malignant, or to draw the line between carcinoma and sarcoma. He therefore does not rely wholly upon the microscope.

He had had no experience with Murphy's button. He had done a number of anastomoses, having used the segmented rubber rings and, in one instance, Senn's plates. The objection urged against anastomosis with any form of appliance is the contraction which follows. The longest case after operation that he has is one of ileo-colostomy, done nine months ago. A one and a half inch opening was made and the segmented rubber ring employed. The Abbé operation seems to be less open to this objection.

Dr. WILLIAM J. TAYLOR stated that he assisted Dr. Keen in this operation, and had an opportunity to feel this mass, which, in spite of the results of the post-mortem, he persists in thinking a malignant growth of the hepatic flexure of the colon. The character of the growth was not that of a scybalous mass. It was very fixed, and surrounded by dense adhesions. In his opinion the specimen represents that portion of the colon up to this mass, where it was densely adherent.